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SEQUENCE LISTING

<110> MADDON, Paul J.

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GARDNER, Jason

MA, Dangshe

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<212> PRT

<213> Homo sapiens

<400> 15

Met	Glu	Leu	Gly	Leu	Arg	Trp	Gly	Phe	Leu	Val	Ala	Leu	Leu	Arg	Gly	1	5	10	15
Val	Gln	Cys	Gln	Val	Gln	Leu	Val	Glu	Ser	Gly	Gly	Gly	Val	Val	Gln	20	25	30	
Pro	Gly	Arg	Ser	Leu	Arg	Leu	Ser	Cys	Ala	Ala	Ser	Gly	Phe	Ala	Phe	35	40	45	
Ser	Arg	Tyr	Gly	Met	His	Trp	Val	Arg	Gln	Ala	Pro	Gly	Lys	Gly	Leu	50	55	60	
Glu	Trp	Val	Ala	Val	Ile	Trp	Tyr	Asp	Gly	Ser	Asn	Lys	Tyr	Tyr	Ala	65	70	75	80
Asp	Ser	Val	Lys	Gly	Arg	Phe	Thr	Ile	Ser	Arg	Asp	Asn	Ser	Lys	Asn	85	90	95	
Thr	Gln	Tyr	Leu	Gln	Met	Asn	Ser	Leu	Arg	Ala	Glu	Asp	Thr	Ala	Val	100	105	110	
Tyr	Tyr	Cys	Ala	Arg	Gly	Gly	Asp	Phe	Leu	Tyr	Tyr	Tyr	Tyr	Tyr	Gly	115	120	125	

Met Asp Val Trp Gly Gln Gly Thr Thr Val Thr Val Ser Ser
130 135 140

<210> 16

<211> 463

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic Oligonucleotide

<400> 16

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taccagatgt gacatccaga tgaccagtc tccatcctcc ctgtctgcat ctgtaggaga      120
cagagtcacc atcacttgcc gggcgagtca gggcattagc aattatttag cctgggtatca      180
gcagaaaaca gggaaagtgc ctaagttcct gatctatgaa gcatccactt tgcaatcagg      240
gggtcccatct cgggttcagt gcggtggatc tgggacagat ttcaactctca ccatcagcag      300
cctgcagcct gaagatgttg caacttatta ctgtcaaaat tataacagtg cccattcac      360
tttcggccct gggaccaaaag tggatatcaa acgaactgtg gctgcaccct ctgtcttcat      420
cttcccgcca tctgatgagc agttgaaatc tggaactgct agc                        463

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<210> 17

<211> 127

<212> PRT

<213> Homo sapiens

<400> 17

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Met Arg Val Pro Ala Gln Leu Leu Gly Leu Leu Leu Trp Leu Pro
1          5          10          15
Asp Thr Arg Cys Asp Ile Gln Met Thr Gln Ser Pro Ser Ser Leu Ser
20        25        30
Ala Ser Val Gly Asp Arg Val Thr Ile Thr Cys Arg Ala Ser Gln Gly
35        40        45
Ile Ser Asn Tyr Leu Ala Trp Tyr Gln Gln Lys Thr Gly Lys Val Pro
50        55        60
Lys Phe Leu Ile Tyr Glu Ala Ser Thr Leu Gln Ser Gly Val Pro Ser
65        70        75        80
Arg Phe Ser Gly Gly Gly Ser Gly Thr Asp Phe Thr Leu Thr Ile Ser
85        90        95

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Ser Leu Gln Pro Glu Asp Val Ala Thr Tyr Tyr Cys Gln Asn Tyr Asn
100 105 110

Ser Ala Pro Phe Thr Phe Gly Pro Gly Thr Lys Val Asp Ile Lys
115 120 125

<210> 18

<211> 508

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic Oligonucleotide

<400> 18
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cctcgttgct cttttaagag gtgtccagtg tcaggtgcag ctggtggagt ctgggggagg 120
cgtgggtccag cctgggaggt ccctgagact ctctgtgca gcgtctggat tcaccttcag 180
taactatgtc atgcactggg tccgccaggc tccaggcaag gggctggagt ggggtggcaat 240
tatatggtat gatggaagta ataaatacta tgcagactcc gtgaagggcc gattcaccat 300
ctccagagac aattccaaga acacgctgta tctgcaaattg aacagcctga gagccgagga 360
cacggctgtg tattactgtg cgggtggata taactggaac tacgagtacc actactacgg 420
tatggacgtc tggggccaag ggaccacggg caccgtctcc tcagcctcca ccaagggccc 480
atcggttcttc cccctggcac cctctagc 508

<210> 19

<211> 143

<212> PRT

<213> Homo sapiens

<400> 19

Met Glu Leu Gly Leu Arg Trp Val Leu Leu Val Ala Leu Leu Arg Gly
1 5 10 15
Val Gln Cys Gln Val Gln Leu Val Glu Ser Gly Gly Gly Val Val Gln
20 25 30
Pro Gly Arg Ser Leu Arg Leu Ser Cys Ala Ala Ser Gly Phe Thr Phe
35 40 45
Ser Asn Tyr Val Met His Trp Val Arg Gln Ala Pro Gly Lys Gly Leu
50 55 60

Glu Trp Val Ala Ile Ile Trp Tyr Asp Gly Ser Asn Lys Tyr Tyr Ala
65 70 75 80

Asp Ser Val Lys Gly Arg Phe Thr Ile Ser Arg Asp Asn Ser Lys Asn
85 90 95

Thr Leu Tyr Leu Gln Met Asn Ser Leu Arg Ala Glu Asp Thr Ala Val
100 105 110

Tyr Tyr Cys Ala Gly Gly Tyr Asn Trp Asn Tyr Glu Tyr His Tyr Tyr
115 120 125

Gly Met Asp Val Trp Gly Gln Gly Thr Thr Val Thr Val Ser Ser
130 135 140

<210> 20

<211> 463

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic Oligonucleotide

<400> 20

ggatctcacc atgaggggtcc ccgctcagct cctgggggtc ctgctgctct gtttcccagg 60

tgccagatgt gacatccaga tgaccagtc tccatcctca ctgtctgcat ctgtaggaga 120

cagagtcacc atcacttgct gggcgagtca gggcattacc aattatttag cctgggttca 180

gcagaaacca gggaaagccc ctaagtcctt tatctatgct gcatccagtt tgcaaagtgg 240

ggtcccatca aagttcagcg gcagtggatc tgggacagat ttcagtctca ccatcagcag 300

cctgcagcct gaagattttg caacttatta ctgccaacag tataatagtt acccgatcac 360

cttcggccaa gggacacgac tggagattaa acgaactgtg gctgcaccat ctgtcttcat 420

cttcccgcga tctgatgagc agttgaaatc tggaaactgt agc 463

<210> 21

<211> 127

<212> PRT

<213> Homo sapiens

<400> 21

Met Arg Val Pro Ala Gln Leu Leu Gly Leu Leu Leu Leu Cys Phe Pro
1 5 10 15

Gly Ala Arg Cys Asp Ile Gln Met Thr Gln Ser Pro Ser Ser Leu Ser
20 25 30

Ala	Ser	Val	Gly	Asp	Arg	Val	Thr	Ile	Thr	Cys	Arg	Ala	Ser	Gln	Gly
		35					40					45			
Ile	Thr	Asn	Tyr	Leu	Ala	Trp	Phe	Gln	Gln	Lys	Pro	Gly	Lys	Ala	Pro
		50				55					60				
Lys	Ser	Leu	Ile	Tyr	Ala	Ala	Ser	Ser	Leu	Gln	Ser	Gly	Val	Pro	Ser
65					70					75					80
Lys	Phe	Ser	Gly	Ser	Gly	Ser	Gly	Thr	Asp	Phe	Ser	Leu	Thr	Ile	Ser
				85					90					95	
Ser	Leu	Gln	Pro	Glu	Asp	Phe	Ala	Thr	Tyr	Tyr	Cys	Gln	Gln	Tyr	Asn
			100					105					110		
Ser	Tyr	Pro	Ile	Thr	Phe	Gly	Gln	Gly	Thr	Arg	Leu	Glu	Ile	Lys	
		115					120					125			

<210> 22

<211> 490

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic Oligonucleotide

<400> 22

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ccagtgtcag gtccagctgg tggagtctgg gggaggcgtg gtccagcctg ggaggtccct	120
gagactctcc tgtgcagcgt ctggattcac cttcagtagc tatggcatgc actgggtccg	180
ccaggctcca ggcaaggggc tggactgggt ggcaattatt tggcatgatg gaagtaataa	240
atactatgca gactccgtga agggccgatt caccatctcc agagacaatt ccaagaagac	300
gctgtacctg caaatgaaca gtttgagagc cgaggacacg gctgtgtatt actgtgagag	360
agcttggggc tatgactacg gtgactatga atactacttc ggtatggacg tctggggcca	420
agggaccacg gtcaccgtct cctcagcctc caccaagggc ccatcggtct tccccctggc	480
accctctagc	490

<210> 23

<211> 145

<212> PRT

<213> Homo sapiens

<400> 23

Met Glu Leu Gly Leu Ser Trp Val Phe Leu Val Ala Leu Leu Arg Gly
 1 5 10 15
 Val Gln Cys Gln Val Gln Leu Val Glu Ser Gly Gly Gly Val Val Gln
 20 25 30
 Pro Gly Arg Ser Leu Arg Leu Ser Cys Ala Ala Ser Gly Phe Thr Phe
 35 40 45
 Ser Ser Tyr Gly Met His Trp Val Arg Gln Ala Pro Gly Lys Gly Leu
 50 55 60
 Asp Trp Val Ala Ile Ile Trp His Asp Gly Ser Asn Lys Tyr Tyr Ala
 65 70 75 80
 Asp Ser Val Lys Gly Arg Phe Thr Ile Ser Arg Asp Asn Ser Lys Lys
 85 90 95
 Thr Leu Tyr Leu Gln Met Asn Ser Leu Arg Ala Glu Asp Thr Ala Val
 100 105 110
 Tyr Tyr Cys Ala Arg Ala Trp Ala Tyr Asp Tyr Gly Asp Tyr Glu Tyr
 115 120 125
 Tyr Phe Gly Met Asp Val Trp Gly Gln Gly Thr Thr Val Thr Val Ser
 130 135 140

Ser
 145

<210> 24

<211> 463

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic Oligonucleotide

<400> 24

ggatctcacc atgagggtcc ctgctcagct cctggggctc ctgctgctct gtttcccagg 60
 tgccagatgt gacatccaga tgaccagtc tccatcctca ctgtctgcat ctgtaggaga 120
 cagagtcacc atcacttgtc gggcgagtca gggcattagc cattatttag cctgggttca 180
 gcagaaacca gggaaagccc ctaagtcctt gatctatgct gcatccagtt tgcaaagtgg 240
 ggtcccatca aagttcagcg gcagtggatc tgggacagat ttactctca ccatcagcag 300
 cctacagcct gaagattttg caacttatta ctgccaacag tataatagtt tcccgtcac 360
 tttcggcgga gggaccaagg tggagatcaa acgaactgtg gctgcaccat ctgtcttcac 420
 cttcccgcca tctgatgagc agttgaaatc tggaaactgt agc 463

<210> 25

<211> 127

<212> PRT

<213> Homo sapiens

<400> 25

Met Arg Val Pro Ala Gln Leu Leu Gly Leu Leu Leu Leu Cys Phe Pro
1 5 10 15

Gly Ala Arg Cys Asp Ile Gln Met Thr Gln Ser Pro Ser Ser Leu Ser
20 25 30

Ala Ser Val Gly Asp Arg Val Thr Ile Thr Cys Arg Ala Ser Gln Gly
35 40 45

Ile Ser His Tyr Leu Ala Trp Phe Gln Gln Lys Pro Gly Lys Ala Pro
50 55 60

Lys Ser Leu Ile Tyr Ala Ser Ser Leu Gln Ser Gly Val Pro Ser
65 70 75 80

Lys Phe Ser Gly Ser Gly Ser Gly Thr Asp Phe Thr Leu Thr Ile Ser
85 90 95

Ser Leu Gln Pro Glu Asp Phe Ala Thr Tyr Tyr Cys Gln Gln Tyr Asn
100 105 110

Ser Phe Pro Leu Thr Phe Gly Gly Gly Thr Lys Val Glu Ile Lys
115 120 125

<210> 26

<211> 469

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic Oligonucleotide

<400> 26

ggatcccacc atgggggtcaa ccgtcatcct cgccctcctc ctggctgttc tccaaggagt 60

ctgtgccgag gtgcagctgg tgcagtctgg agcagagggtg aaaaagcccg gggagtctct 120

gaagatctcc tgtaagggtt ctggatacag ctttaccagt tactggatcg gctgggtgcg 180

ccagatgccc gggaaaggcc tggagtggat ggggatcatc taccctgggtg actctgatac 240

cagatacagc ccgtccttcc aaggccaggt caccatctca gccgacaagt ccatcagcac 300

cgctacctg cagtggagca gcctgaaggc ctgggacacc gccatgtatt actgtgcgag 360

acggatggca gcagctggcc cctttgacta ctggggccag ggaaccctgg tcaccgtctc 420
ctcagcctcc accaagggcc catcggtctt cccctggca ccctctagc 469

<210> 27

<211> 138

<212> PRT

<213> Homo sapiens

<400> 27

Met	Gly	Ser	Thr	Val	Ile	Leu	Ala	Leu	Leu	Leu	Ala	Val	Leu	Gln	Gly	
1				5				10						15		
Val	Cys	Ala	Glu	Val	Gln	Leu	Val	Gln	Ser	Gly	Ala	Glu	Val	Lys	Lys	
			20					25					30			
Pro	Gly	Glu	Ser	Leu	Lys	Ile	Ser	Cys	Lys	Gly	Ser	Gly	Tyr	Ser	Phe	
			35				40					45				
Thr	Ser	Tyr	Trp	Ile	Gly	Trp	Val	Arg	Gln	Met	Pro	Gly	Lys	Gly	Leu	
			50			55					60					
Glu	Trp	Met	Gly	Ile	Ile	Tyr	Pro	Gly	Asp	Ser	Asp	Thr	Arg	Tyr	Ser	
65				70					75						80	
Pro	Ser	Phe	Gln	Gly	Gln	Val	Thr	Ile	Ser	Ala	Asp	Lys	Ser	Ile	Ser	
			85						90					95		
Thr	Ala	Tyr	Leu	Gln	Trp	Ser	Ser	Leu	Lys	Ala	Ser	Asp	Thr	Ala	Met	
			100					105					110			
Tyr	Tyr	Cys	Ala	Arg	Arg	Met	Ala	Ala	Ala	Gly	Pro	Phe	Asp	Tyr	Trp	
		115					120					125				
Gly	Gln	Gly	Thr	Leu	Val	Thr	Val	Ser	Ser							
	130					135										

<210> 28

<211> 466

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic Oligonucleotide

<400> 28

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taccactgga	ggaatagtga	tgacgcagtc	tccagccacc	ctgtctgtgt	ctccagggga	120
aagagccacc	ctctcctgca	ggaccagtca	gagtattggc	tggaaacttag	cctgggtacca	180

acagaaacct ggccaggctc ccaggctcct catctatggg gcattctcca ggaccactgg 240
 tatcccagcc aggttcagtg gcagtgggtc tgggacagag ttcactctca ccatcagcag 300
 cctgcagtct gaagattctg cagtttatta ctgtcagcat tatgataact ggcccatgtg 360
 cagttttggc caggggaccg agctggagat caaacgaact gtggctgcac catctgtctt 420
 catcttcccg ccatctgatg agcagttgaa atctggaact gctagc 466

<210> 29

<211> 128

<212> PRT

<213> Homo sapiens

<400> 29

Met	Arg	Val	Pro	Ala	Gln	Leu	Leu	Phe	Leu	Leu	Leu	Leu	Trp	Leu	Pro	
1				5					10					15		
Asp	Thr	Thr	Gly	Gly	Ile	Val	Met	Thr	Gln	Ser	Pro	Ala	Thr	Leu	Ser	
			20					25					30			
Val	Ser	Pro	Gly	Glu	Arg	Ala	Thr	Leu	Ser	Cys	Arg	Thr	Ser	Gln	Ser	
		35					40					45				
Ile	Gly	Trp	Asn	Leu	Ala	Trp	Tyr	Gln	Gln	Lys	Pro	Gly	Gln	Ala	Pro	
	50					55					60					
Arg	Leu	Leu	Ile	Tyr	Gly	Ala	Ser	Ser	Arg	Thr	Thr	Gly	Ile	Pro	Ala	
65					70				75					80		
Arg	Phe	Ser	Gly	Ser	Gly	Ser	Gly	Thr	Glu	Phe	Thr	Leu	Thr	Ile	Ser	
			85					90						95		
Ser	Leu	Gln	Ser	Glu	Asp	Ser	Ala	Val	Tyr	Tyr	Cys	Gln	His	Tyr	Asp	
		100						105					110			
Asn	Trp	Pro	Met	Cys	Ser	Phe	Gly	Gln	Gly	Thr	Glu	Leu	Glu	Ile	Lys	
		115					120					125				

<210> 30

<211> 487

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic Oligonucleotide

<400> 30

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ccagtgtcag gtgcagctgg tggagtctgg gggaggcgtg gtccagcctg ggaggtccct 120
gagactctcc tgtgcagcct ctggattcac cttcattagc tatggcatgc actgggtccg 180
ccaggctcca ggcaaggggc tggagtgggt ggcagttata tcatatgatg gaagtaataa 240
atactatgca gactccgtga agggccgatt caccatctcc agagacaatt ccaagaacac 300
gctgtatctg caaatgaaca gcctgagagc tgaggacacg gctgtgtatt actgtgcgag 360
agtattagtg ggagctttat attattataa ctactacggg atggacgtct ggggccaaagg 420
gaccacgggc accgtctcct cagcctccac caagggccca tcggtcttcc ccctggcacc 480
ctctagc 487

<210> 31

<211> 144

<212> PRT

<213> Homo sapiens

<400> 31

Met Glu Phe Gly Leu Cys Trp Ile Phe Leu Val Ala Leu Leu Arg Gly
1 5 10 15
Val Gln Cys Gln Val Gln Leu Val Glu Ser Gly Gly Gly Val Val Gln
20 25 30
Pro Gly Arg Ser Leu Arg Leu Ser Cys Ala Ala Ser Gly Phe Thr Phe
35 40 45
Ile Ser Tyr Gly Met His Trp Val Arg Gln Ala Pro Gly Lys Gly Leu
50 55 60
Glu Trp Val Ala Val Ile Ser Tyr Asp Gly Ser Asn Lys Tyr Tyr Ala
65 70 75 80
Asp Ser Val Lys Gly Arg Phe Thr Ile Ser Arg Asp Asn Ser Lys Asn
85 90 95
Thr Leu Tyr Leu Gln Met Asn Ser Leu Arg Ala Glu Asp Thr Ala Val
100 105 110
Tyr Tyr Cys Ala Arg Val Leu Val Gly Ala Leu Tyr Tyr Tyr Asn Tyr
115 120 125
Tyr Gly Met Asp Val Trp Gly Gln Gly Thr Thr Val Thr Val Ser Ser
130 135 140

<210> 32

<211> 478

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic Oligonucleotide

<400> 32
ggatctcacc atgaggggtcc ctgctcagct cctggggctg ctaatgctct ggatacctgg 60
atccagtgc gatattgtga tgaccagac tccactctct ctgtccgtca cccctggaca 120
gccggcctcc atctcctgca agtctagtca gagcctcctg catagtgatg gaaagacctt 180
tttgtattgg tatctgcaga agccaggcca gcctccacag ctctgatct atgaggtttc 240
caaccggttc tctggagtgc cagataggtt cagtggcagc gggtcaggga cagatttcac 300
actgaaaatc agccgggtgg aggctgagga tgttgggctt tattactgca tgcaaagtat 360
acagcttccg ctcactttcg gcggaggggac caaggtggag atcaaacgaa ctgtgggtgc 420
accatctgtc ttcactttcc cgccatctga tgagcagttg aaatctggaa ctgctagc 478

<210> 33

<211> 132

<212> PRT

<213> Homo sapiens

<400> 33

Met	Arg	Val	Pro	Ala	Gln	Leu	Leu	Gly	Leu	Leu	Met	Leu	Trp	Ile	Pro	1	5	10	15
Gly	Ser	Ser	Ala	Asp	Ile	Val	Met	Thr	Gln	Thr	Pro	Leu	Ser	Leu	Ser	20	25	30	
Val	Thr	Pro	Gly	Gln	Pro	Ala	Ser	Ile	Ser	Cys	Lys	Ser	Ser	Gln	Ser	35	40	45	
Leu	Leu	His	Ser	Asp	Gly	Lys	Thr	Phe	Leu	Tyr	Trp	Tyr	Leu	Gln	Lys	50	55	60	
Pro	Gly	Gln	Pro	Pro	Gln	Leu	Leu	Ile	Tyr	Glu	Val	Ser	Asn	Arg	Phe	65	70	75	80
Ser	Gly	Val	Pro	Asp	Arg	Phe	Ser	Gly	Ser	Gly	Ser	Gly	Thr	Asp	Phe	85	90	95	
Thr	Leu	Lys	Ile	Ser	Arg	Val	Glu	Ala	Glu	Asp	Val	Gly	Leu	Tyr	Tyr	100	105	110	
Cys	Met	Gln	Ser	Ile	Gln	Leu	Pro	Leu	Thr	Phe	Gly	Gly	Gly	Thr	Lys	115	120	125	
Val	Glu	Ile	Lys																

130

<210> 34

<211> 15

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic Oligonucleotide

<400> 34

gaagatctca ccatg

15

<210> 35

<211> 39

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic Oligonucleotide

<400> 35

aactagctag cagttccaga tttcaactgc tcatcagat

39

<210> 36

<211> 15

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic Oligonucleotide

<400> 36

gaagatctca ccatg

15

<210> 37

<211> 30

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic Oligonucleotide

<400> 37

gctctagagg gtgccagggg gaagaccgat

30

<210> 38

<211> 11

<212> PRT

<213> Artificial Sequence

<220>

<223> Synthetic Peptide

<400> 38

Ser Ala Thr Gly Ser Lys Leu Gln Glu Asp Ser
1 5 10

<210> 39

<211> 9

<212> PRT

<213> Artificial Sequence

<220>

<223> Synthetic Peptide

<400> 39

Arg Ser Pro Ala Leu Pro Phe Val Ser
1 5